EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	us-20040197705-$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 12:03
L2	6	("4743530" or "4743531" or "5329019").pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 12:08
L3	414	(squarene or squarilium) with (cyanine or cryptocyanine)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 12:13
L4	422	(squarene or squarilium) with (cyanine or cryptocyanine or indolen$6 or benzoindolen$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 12:38
L5	357	l4 and @ad<"20040330"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:46
L6	223	(squarene or squarilium) and ((optical or laser or information) near5 (medium or media or disk or disc)).ti, ab,clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:46
L7	71	l6 not l5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 12:48
L8	1	548/490.ccls. and (squarine or squarilium)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:16
L9	64	((squarine or squarilium) near5 (dye or compound)).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 12:52

EAST Search History

L10	1	548/490.ccls. and (squaric or (cyclobutene adj2 (dione or one)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:37
L11	46	(asymmetric$4 or unsymmetric$6) near5 (squarine or squarilium or squaric or (cyclobutene adj2 (dione or one)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:52
L12	12	("5795981" or "5656750" or "5492795" or "4677045" or "5237498" or "5354873").pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:39
L13	2	"4175956".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:39
L14	37	(squarene or squarilium) and (filter).ti,ab,clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:56
L15	27	l14 and @ad<"20040330"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:46
L16	1255	(cyanine) and (filter).ti,ab,clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:53
L17	399	((asymmetric$4 or unsymmetric$6) near5 cyanine)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:52
L18	8	l17 and (filter).ti,ab,clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 13:53
L19	25	(squarene or squarilium) same (display or filter)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:56

EAST Search History

L20	14	(squarene or squarilium) and (display or filter)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:35
L21	40	(filter or display) and (squaric or (cyclobutene adj2 (dione or one)))	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:44
L22	38	l21 not l20	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:38
L23	72	(squaric or (cyclobutene adj2 (dione or one))) and ((optical or laser or information) near5 (medium or media or disk or disc))	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:57
L24	46	l23 not l22	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:54
L25	2	jp-03188063-$.did.	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:54
L26	139	(squarylium) same (display or filter)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:57
L27	157	(squarylium) and ((optical or laser or information) near5 (medium or media or disk or disc))	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:57
L28	76	(squarylium) same (display or filter)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:57
L29	212	(l27 or l28)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/17 14:58

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$%^STN;HighlightOn=  ***;HighlightOff=***  ;

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 NEWS  4  AUG 28   ADISCTI Reloaded and Enhanced
 NEWS  5  AUG 30   CA(SM)/CAplus(SM) Austrian patent law changes
 NEWS  6  SEP 11   CA/CAplus enhanced with more pre-1907 records
 NEWS  7  SEP 21   CA/CAplus fields enhanced with simultaneous left and right
                   truncation
 NEWS  8  SEP 25   CA(SM)/CAplus(SM) display of CA Lexicon enhanced
 NEWS  9  SEP 25   CAS REGISTRY(SM) no longer includes Concord 3D coordinates
 NEWS 10  SEP 25   CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
 NEWS 11  SEP 28   CEABA-VTB classification code fields reloaded with new
                   classification scheme
 NEWS 12  OCT 19   LOGOFF HOLD duration extended to 120 minutes
 NEWS 13  OCT 19   E-mail format enhanced
 NEWS 14  OCT 23   Option to turn off MARPAT highlighting enhancements available
 NEWS 15  OCT 23   CAS Registry Number crossover limit increased to 300,000 in
                   multiple databases
 NEWS 16  OCT 23   The Derwent World Patents Index suite of databases on STN
                   has been enhanced and reloaded
 NEWS 17  OCT 30   CHEMLIST enhanced with new search and display field
 NEWS 18  NOV 03   JAPIO enhanced with IPC 8 features and functionality
 NEWS 19  NOV 10   CA/CAplus F-Term thesaurus enhanced
 NEWS 20  NOV 10   STN Express with Discover! free maintenance release Version
                   8.01c now available
 NEWS 21  NOV 13   CA/CAplus pre-1967 chemical substance index entries enhanced
                   with preparation role

 NEWS EXPRESS  NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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 NEWS IPC8     For general information regarding STN implementation of IPC 8
 NEWS X25      X.25 communication option no longer available

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=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21
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FILE COVERS 1907 - 17 Nov 2006  VOL 145 ISS 22
FILE LAST UPDATED: 16 Nov 2006  (20061116/ED)

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=> s us 2004-0197705/pn
L1            1 US 2004-0197705/PN
                (US2004197705/PN)

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     2.41       2.62

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DICTIONARY FILE UPDATES:  16 NOV 2006  HIGHEST RN 913474-36-9

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=> tra rn l1
L2            TRANSFER L1 1- RN :      11 TERMS
L3            11 L2

=> d scan

L3   11 ANSWERS  REGISTRY  COPYRIGHT 2006 ACS on STN
IN   Cyclobutenediylium, 1-(1-methyl-1H-indol-3-yl)-2,4-dihydroxy-3-[(3-
     methylspiro[1H-benz[e]indole-1,1'-cyclohexan]-2(3H)-ylidene)methyl]-,
     bis(inner salt) (9CI)
MF   C32 H28 N2 O2


/ Structure 1 in file .gra /
```

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Cyclobutenediylium, 1-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-3-(5-fluoro-2-methyl-1H-indol-3-yl)-2,4-dihydroxy-, bis(inner salt) (9CI)
MF C25 H21 F N2 O2

/ Structure 2 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Cyclobutenediylium, 1-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2,4-dihydroxy-3-(1-methyl-1H-indol-3-yl)-, bis(inner salt) (9CI)
MF C25 H22 N2 O2

/ Structure 3 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Cyclobutenediylium, 1-[[1,3-dihydro-3,3-dimethyl-1-(3-methylbutyl)-2H-indol-2-ylidene]methyl]-2,4-dihydroxy-3-(1-methyl-1H-indol-3-yl)-, bis(inner salt) (9CI)
MF C29 H30 N2 O2

/ Structure 4 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Cyclobutenediylium, 1-[[1,3-dihydro-3,3-dimethyl-1-(3-methylbutyl)-2H-indol-2-ylidene]methyl]-2,4-dihydroxy-3-[1-(3-methylbutyl)-1H-indol-3-yl]-, bis(inner salt) (9CI)
MF C33 H38 N2 O2

/ Structure 5 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN

IN Cyclobutenediylium, 1-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2,4-dihydroxy-3-(1H-indol-3-yl)-, bis(inner salt) (9CI)
MF C24 H20 N2 O2

/ Structure 6 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Cyclobutenediylium, 1-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2,4-dihydroxy-3-[2-methyl-1-(3-methylbutyl)-5-nitro-1H-indol-3-yl]-, bis(inner salt) (9CI)
MF C30 H31 N3 O4

/ Structure 7 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Cyclobutenediylium, 1-(5-chloro-1-methyl-1H-indol-3-yl)-3-[[1,3-dihydro-3,3-dimethyl-1-(3-methylbutyl)-2H-indol-2-ylidene]methyl]-2,4-dihydroxy-, bis(inner salt) (9CI)
MF C29 H29 Cl N2 O2

/ Structure 8 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Cyclobutenediylium, 1-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2,4-dihydroxy-3-[1-(3-methylbutyl)-1H-indol-3-yl]-, bis(inner salt) (9CI)
MF C29 H30 N2 O2

/ Structure 9 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Cyclobutenediylium, 1-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2,4-dihydroxy-3-(1-methyl-2-phenyl-1H-indol-3-yl)-, bis(inner salt) (9CI)
MF C31 H26 N2 O2

/ Structure 10 in file .gra /

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HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Cyclobutenediylium, 1-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-3-(1,2-dimethyl-1H-indol-3-yl)-2,4-dihydroxy-, bis(inner salt) (9CI)
MF C26 H24 N2 O2
CI CCS

/ Structure 11 in file .gra /

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FULL ESTIMATED COST 0.44 14.81

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FILE LAST UPDATED: 16 Nov 2006 (20061116/ED)

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=> s l3
L4 3 L3

=> d all 1-3

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:822900 CAPLUS <<LOGINID::20061117>>
DN 141:340488
ED Entered STN: 08 Oct 2004
TI Cyanine compound for optical filter and optical recording medium
IN Shimizu, Masaaki; Shigeno, Koishi; Yano, Toru
PA Asahi Denka Co., Ltd., Japan
SO Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW
DT Patent
LA English
IC ICM C09B057-00
ICS G02B005-00; G11B007-24; C07D209-12
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1464678	A1	20041006	EP 2004-8244	20040405
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	JP 2004315789	A2	20041111	JP 2004-35683	20040212
	US 2004197705	A1	20041007	US 2004-812179	20040330
	KR 2004086845	A	20041012	KR 2004-23215	20040403
	CN 1535965	A	20041013	CN 2004-10034232	20040405
PRAI	JP 2003-101725	A	20030404		
	JP 2004-35683	A	20040212		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1464678	ICM	C09B057-00
	ICS	G02B005-00; G11B007-24; C07D209-12
	IPCI	C09B0057-00 [ICM,7]; G02B0005-00 [ICS,7]; G11B0007-24 [ICS,7]; C07D0209-12 [ICS,7]; C07D0209-00 [ICS,7,C*]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0209-96 [I,A]; C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-00 [I,A]; G02B0005-22 [I,C*]; G02B0005-22 [I,A]; G11B0007-24 [I,C*]; G11B0007-248 [I,A]
	ECLA	C07D209/12; C09B057/00S; G11B007/248
JP 2004315789	IPCI	C09B0023-00 [ICM,7]; C07D0209-12 [ICS,7]; C07D0209-96 [ICS,7]; C07D0209-00 [ICS,7,C*]; G02B0005-22 [ICS,7]; G03F0007-004 [ICS,7]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-248 [I,A]
	FTERM	2H025/AA10; 2H025/AA11; 2H025/AB13; 2H025/AB14; 2H025/AB17; 2H025/AD01; 2H025/AD03; 2H025/CC13; 2H048/CA04; 2H048/CA14; 2H048/CA19; 4C204/BB05; 4C204/BB09; 4C204/CB03; 4C204/CB27; 4C204/DB16; 4C204/EB02; 4C204/EB03; 4C204/FB01; 4C204/FB03; 4C204/GB01; 4C204/GB24; 4H056/CA01; 4H056/CC02; 4H056/CC08; 4H056/CE03; 4H056/CE07; 4H056/DD03; 4H056/FA05
US 2004197705	IPCI	G11B0007-26 [ICM,7]; C07D0209-04 [ICS,7]; C07D0209-00 [ICS,7,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-248 [I,A]
	NCL	430/270.200; 369/284.000; 428/064.800; 430/007.000; 430/270.210; 430/945.000; 548/469.000
	ECLA	C07D209/12; C09B057/00S; G11B007/248
KR 2004086845	IPCI	C07D0403-10 [ICM,7]; C07D0403-00 [ICM,7,C*]
CN 1535965	IPCI	C07D0403-12 [ICM,7]; C07D0403-00 [ICM,7,C*]; G03G0005-00 [ICS,7]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0209-96 [I,A]; C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-00 [I,A]; G02B0005-22 [I,C*]; G02B0005-22 [I,A]; G11B0007-24 [I,C*]; G11B0007-248 [I,A]
	ECLA	C07D209/12; C09B057/00S; G11B007/248

OS MARPAT 141:340488
GI

/ Structure 12 in file .gra /

AB Disclosed are a cyanine compd. of formula I (ring A = benzene or naphthalene; R1, R2 = H, halogen, nitro, cyano, C1-8-alkyl, C1-8-alkoxy, C6-30- aryl; R3 = H, C1-8-alkyl, C6-30-aryl; X = O, S, Se, -CR4R5-, -NH-, -NY'-; Y1, Y2 = H, C1-30-org. group; R4, R5 = C1-4-alkyl or benzyl; R4 and R5 are taken together to form C3-6-cycloalkane-1,1-diyl; and Y' = C1-30-org. group), an optical filter contg. the cyanine compd., and an optical recording material contg. the cyanine compd. which is used to form an optical recording layer of an optical recording medium. The object of the present invention is to provide a cyanine compd. excellent in resistance to light and heat and suited as an optical element for use in an optical filter of image display devices or in a laser optical recording material.

ST cyanine compd optical filter recording medium liq crystal display

IT Liquid crystal displays
(cyanine compd. for optical filter and)

IT Optical filters
Optical recording materials
(cyanine compd. for optical filter and optical recording medium)

IT ***72907-71-2P*** ***769939-93-7P*** ***769939-94-8P***
769939-96-0P ***769939-97-1P*** ***769939-99-3P***
769940-00-3P ***769940-01-4P*** ***769940-02-5P***
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(cyanine compd. for optical filter and optical recording medium)

IT ***769939-95-9*** ***769939-98-2***
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(cyanine compd. for optical filter and optical recording medium)

L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:829685 CAPLUS <<LOGINID::20061117>>
DN 136:135067
ED Entered STN: 15 Nov 2001
TI Energetics of electron-transfer reactions of photoinitiated polymerization: dye-sensitized fragmentation of N-alkoxypyridinium salts
AU Gould, Ian R.; Shukla, Deepak; Giesen, David; Farid, Samir
CS Department of Chemistry and Biochemistry, Arizona State University, Tempe, AZ, 85287, USA
SO Helvetica Chimica Acta (2001), 84(9), 2796-2812
CODEN: HCACAV; ISSN: 0018-019X
PB Verlag Helvetica Chimica Acta
DT Journal
LA English
CC 35-3 (Chemistry of Synthetic High Polymers)
AB Electron transfer from excited dyes to N-alkoxypyridinium salts leads to reductive cleavage of the N-O bond to give an alkoxy radical that can be used to initiate polymn. The bond-dissocn. energy (BDE) obtained from calcns. based on d.-functional theory were in agreement with predictions from a thermochem. cycle. These data show a difference of ca. 290-315 kJ/mol between the BDE of the pyridinium and that of the pyridyl radical and indicate that the fragmentation of the radical is highly exothermic. The energetic requirements for the photochem. electron transfer are discussed in terms of a simplified model that shows that the initiation efficiency of the radical polymn. can be correlated with a single parameter, the redn. potential of the sensitizing dye. Dyes, including cyanine, styrylpyridinium, rhodamine, squarylium, coumarin, oxanol, with absorption bands spanning the entire visible region were effective in initiating photopolymn. of acrylate monomers in this system. The photoresponse can be doubled through coupling of the reductive cleavage of the N-alkoxypyridinium with oxidative cleavage of the C-B bond of an alkyltriarylborate, a process that utilizes the chem. potential stored in the oxidized dye following electron transfer to the pyridinium salt.

ST dye photoexcitation bond cleavage radical electron transfer; initiator radical polymn dye fragmentation alkoxypyridinium salt; bond dissocn energy radical polymn alkoxypyridinium initiator

IT Alcohols, preparation
RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(aliph., radicals; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT Pyridinium compounds

RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(alkoxy; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT Bond cleavage
Bond energy
Cyanine dyes
Dyes
Photoexcitation
Reduction potential
(energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT Electron transfer
(photochem.; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT Polymerization catalysts
(radical; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT 65-61-2, Acridine Orange 92-32-0, Pyronine Y 117-92-0 514-73-8
989-38-8, Rhodamine 6G 2390-63-8, Rhodamine 3B 3071-70-3 12243-46-8
14806-50-9 19764-96-6 25470-94-4 36536-22-8 38215-36-0
41044-12-6 47367-75-9, Oxazine 1 53213-82-4 53336-12-2 54290-14-1
60311-02-6 61105-56-4 63123-42-2, N-Methoxy-4-phenylpyridinium tetrafluoroborate 68842-65-9 ***72907-71-2*** 80566-27-4
83846-70-2 98766-45-1 105802-46-8 116450-33-0 116450-35-2
116450-36-3 116450-37-4 116450-42-1 116450-44-3 116450-56-7
121956-74-9 154078-27-0 217963-75-2 389104-49-8 393178-09-1
RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT 389104-50-1P
RL: PNU (Preparation, unclassified); PREP (Preparation)
(energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT 18525-99-0
RL: CAT (Catalyst use); USES (Uses)
(inhibitor; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT 122644-44-4
RL: NUU (Other use, unclassified); USES (Uses)
(polymn. medium binder; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Arnold, B; J Am Chem Soc 1996, V118, P5482 CAPLUS
(2) Becke, A; J Chem Phys 1993, V98, P5648 CAPLUS
(3) Crivello, J; Adv Polym Sci 1984, V62, P1 CAPLUS
(4) DeVoe, R; Adv Photochem 1992, V17, P313 CAPLUS
(5) Farid, S; US 4743528 1988 CAPLUS
(6) Farid, S; US 4743529 1988 CAPLUS
(7) Farid, S; US 4743530 1988 CAPLUS
(8) Farid, S; US 4743531 1988 CAPLUS
(9) Farid, S; US 4859572 1989 CAPLUS
(10) Frisch, M; Gaussian98 Revision A7 1998
(11) Giesen, D; Theor Chem Acc 1997, V98, P85 CAPLUS
(12) Gould, I; Acc Chem Res 1996, V29, P522 CAPLUS
(13) Gould, I; unpublished results
(14) Hawkins, G; AMSOL 65.1 1998
(15) Hehre, W; J Chem Phys 1972, V56, P2257 CAPLUS
(16) Howell, J; J Am Chem Soc 1984, V106, P3968 CAPLUS
(17) Kayamam, N; Polym Bull 1994, V32, P589
(18) Krishnan, R; J Chem Phys 1980, V72, P650 CAPLUS
(19) Lee, K; J Chem Soc, Perkin Trans 2 1992, V7, P1011

(20) Lenhard, J; J Imaging Sci 1986, V30, P27 CAPLUS
(21) Lenhard, J; J Phys Chem 1993, V97, P4916 CAPLUS
(22) Loutfy, R; Photogr Sci Eng 1976, V20, P165 CAPLUS
(23) Maslak, P; Angew Chem, Int Ed 1994, V33, P73
(24) McLean, A; J Chem Phys 1980, V72, P5639 CAPLUS
(25) Nicholson, R; Anal Chem 1964, V36, P706 CAPLUS
(26) Paczkowski, J; Electron Transfer in Chemistry 2001, V5, P516 CAPLUS
(27) Pappas, S; UV Curing: Science and Technology 1978
(28) Popielarz, R; J Am Chem Soc 1990, V112, P3068 CAPLUS
(29) Reiser, A; Photoreactive Polymers, the Science and Technology of Resists 1989
(30) Saeva, F; Adv Electron Transfer Chem 1994, V4, P1 CAPLUS
(31) Saeva, F; Top Curr Chem 1990, V156, P59 CAPLUS
(32) Schnabel, W; Macromol Rapid Commun 2000, V21, P628 CAPLUS
(33) Schuster, G; Adv Electron Transfer Chem 1991, V1, P163 CAPLUS
(34) Scott, A; J Phys Chem 1996, V100, P16502 CAPLUS
(35) Specht, D; US 4289844 1981 CAPLUS
(36) Specht, D; Tetrahedron 1982, V38, P1203 CAPLUS
(37) Turro, N; Modern Molecular Photochemistry 1978
(38) Weller, A; Z Phys Chem Munich 1982, V130, P129 CAPLUS
(39) Williams, J; Polym Eng Sci 1983, V23, P1022 CAPLUS
(40) Yagci, Y; Macromol Symp 1994, V85, P115 CAPLUS
(41) Zhu, Q; Eur Polym J 1997, V3, P1325

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1980:102316 CAPLUS <<LOGINID::20061117>>
DN 92:102316
ED Entered STN: 12 May 1984
TI Electrophotosensitive materials for migration imaging processes
IN Haley, Neil F.; Krutak, James J.; Ott, Robert J.
PA Eastman Kodak Co., USA
SO U.S., 15 pp.
CODEN: USXXAM
DT Patent
LA English
IC G03G017-04
INCL 430037000
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4175956	A	19791127	US 1978-876795	19780210
PRAI US 1978-876795	A	19780210		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4175956	IC	G03G017-04
	INCL	430037000
	IPCI	G03G0017-04; G03G0017-00 [C*]
	IPCR	C09B0023-00 [I,C*]; C09B0023-01 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G03G0017-00 [I,C*]; G03G0017-04 [I,A]
	NCL	430/037.000; 544/302.000; 546/098.000; 546/112.000; 546/173.000; 546/191.000; 548/305.400; 548/365.100; 548/455.000; 548/518.000; 549/069.000

GI

/ Structure 13 in file .gra /

AB Electrophotosensitive compds. having the formula I(Z, Z1 = the atoms necessary to form a monovalent or divalent substituted or unsubstituted 5 to 13 member heterocycle contg. O or N or a substituted 5 to 10 member satd. or unsatd. carbocycle; R = H, alkyl, aryl, CN or carboxy ester; m = 0-1; n = 0-3) are described which are esp. useful in electrophoretic imaging dispersions to produce images having excellent color satn., d., and resoln. Thus, an electrophoretic imaging dispersion contg. Isopar G 2.2, Solvesso 1.3, Piccotex 100 1.4, lauryl methacrylate-Li methacrylate-methacrylic acid-vinyltoluene copolymer 0.1, and II 0.45 g was evaluated in a test app. and found to provide an image of good to excellent quality.

```
ST   cyclobutanedione deriv electrophoretic imaging; electrophotosensitive
     cyclobutanedione deriv
IT   Ultraviolet and visible spectra
        (of cyclobutanedione derivs)
IT   Photography, electro-, color
        (electrophoretic, imaging dispersions for, contg. electrophotosensitive
        cyclobutanedione derivs)
IT   9017-27-0   62576-76-5
     RL: USES (Uses)
        (electrophotosensitive compns. contg. cyclobutanedione derivs and, for
        electrophoretic migration imaging)
IT   12243-46-8   63842-82-0   63842-83-1   68842-56-8   68842-57-9
     68842-58-0   68842-59-1   68842-60-4   68842-61-5   68842-64-8
     68842-65-9   68842-66-0   68842-68-2   68842-69-3   72907-64-3
     72907-65-4   72907-66-5   72907-67-6   72907-68-7   72907-69-8
     72907-70-1   ***72907-71-2***     72929-33-0   72936-96-0   72936-97-1
     72936-98-2   72936-99-3   72939-79-8   72952-07-9
     RL: USES (Uses)
        (electrophotosensitive compns. contg., for electrophoretic migration
        imaging)


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COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 9.67      24.48

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                   ENTRY    SESSION
CA SUBSCRIBER PRICE                                -2.25      -2.25

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DICTIONARY FILE UPDATES:  16 NOV 2006  HIGHEST RN 913474-36-9

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=> s l5 sss full
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FULL SCREEN SEARCH COMPLETED -       61 TO ITERATE

100.0% PROCESSED       61 ITERATIONS                          2 ANSWERS
SEARCH TIME: 00.00.01

L6            2 SEA SSS FUL L5

=> file caplus
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
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                                                      ENTRY    SESSION
FULL ESTIMATED COST                                  166.94     191.42

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)       SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                    0.00      -2.25

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FILE LAST UPDATED: 16 Nov 2006  (20061116/ED)

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=> s l6
L7            2 L6

=> d all 1-2

L7   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2006:1093336  CAPLUS <<LOGINID::20061117>>
ED   Entered STN:  19 Oct 2006
TI   Manufacture of cyanine compounds, optical filters and optical recording
     materials using them
IN   Aoyama, Yohei; Shigeno, Koichi
PA   Adeka Corporation, Japan
SO   PCT Int. Appl., 50pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
CC   41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
     Sensitizers)
     Section cross-reference(s): 74
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     --------------      ----   --------    --------------------    --------
PI   WO 2006109618        A1    20061019    WO 2006-JP307093        20060404
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ,
             NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,
             SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
             YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
     JP 2006312710        A2    20061116    JP 2006-4215            20060111
PRAI JP 2005-108339       A     20050405
     JP 2006-4215         A     20060111
CLASS
 PATENT NO.       CLASS  PATENT FAMILY CLASSIFICATION CODES
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WO 2006109618 IPCI C09B0023-00 [I,A]; G02B0005-22 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,C*]
JP 2006312710 IPCI C09B0023-00 [I,A]; C09K0003-00 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,C*]
FTERM 4H056/CA01; 4H056/CB02; 4H056/CB06; 4H056/CC02; 4H056/CC08; 4H056/CE01; 4H056/CE06; 4H056/DD03; 4H056/DD26; 4H056/DD30; 4H056/FA05; 5D029/JA04
GI

/ Structure 14 in file .gra /

AB Cyanine compds. represented by the general formula I, II or III [where in I, A1 is an optionally substituted benzene or naphthalene ring; B is a group represented by the general formula IV or V; R1 is hydrogen, halogen, C1-8 alkyl, C1-8 alkoxy, or C6-30 aryl; R2 is a substituent to be further defined in the document; and Y1 is hydrogen, an org. group having 1 to 30 carbon atoms or a substituent to be further defined; where in II and III, A2 is as defined above for A1 in the general formula I; Y4 and Y5 are each independently as defined above for Y1 in the general formula I; X2 is as defined above for X1 in the general formula I; R10 is as defined above for R1 in the general formula I; R11 is as defined for R2 in the general formula I; R23 and R24 are as defined for R21 and R22 in the general formulas IV and V; n is an integer of 0 to 6; the polymethine chain may be substituted; Anq- is a q-valent anion; q is 1 or 2; and p is a coeff. keeping the elec. charge neutral] are prepd. for use in optical filters for, e.g., LCD, and optical recording materials such as DVD.
ST optical filter recording material cyanine compd; DVD recording material cyanine dye; LCD optical filter cyanine dye
IT Cyanine dyes
Liquid crystal displays
Optical filters
Optical recording materials
(manuf. of cyanine compds. for use in optical filters for LCD and optical recording materials)
IT 913081-19-3P 913081-21-7P 913081-22-8P 913081-24-0P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(dye intermediate; manuf. of cyanine compds. for use in optical filters for LCD and optical recording materials)
IT 913081-13-7P ***913081-14-8P*** 913081-16-0P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dyes; manuf. of cyanine compds. for use in optical filters for LCD and optical recording materials)
IT 91-55-4, 2,3-Dimethylindole 603-76-9, 1-Methylindole 2892-62-8 100716-80-1, Phenoxyethyl 4-chlorobenzenesulfonate 162382-19-6, (4-Iodobutyl)ferrocene
RL: RCT (Reactant); RACT (Reactant or reagent)
(manuf. of cyanine compds. for use in optical filters for LCD and optical recording materials)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Asahi Denka Kogyo Kabushiki Kaisha; JP 200147740 A 2001
(2) Asahi Denka Kogyo Kabushiki Kaisha; US 2003224293 A1 2001
(3) Asahi Denka Kogyo Kabushiki Kaisha; WO 2006035555 A1 2006 CAPLUS
(4) Canon Inc; JP 61-126555 A 1986 CAPLUS
(5) Taiyo Yuden Co Ltd; JP 2004195765 A 2004 CAPLUS
(6) Tamura Kaken Kabushiki Kaisha; JP 2003171571 A 2003 CAPLUS

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1988:539163 CAPLUS <<LOGINID::20061117>>
DN 109:139163
ED Entered STN: 14 Oct 1988
TI Dye-sensitized photographic imaging system
IN Farid, Samir Y.; Haley, Neil F.; Moody, Roger E.; Specht, Donald P.
PA Eastman Kodak Co., USA
SO U.S., 25 pp.
CODEN: USXXAM

DT Patent
LA English
IC ICM G03C001-72
INCL 430281000
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4743531	A	19880510	US 1986-933712	19861121
	CA 1329042	A1	19940503	CA 1987-547870	19870925
	JP 63138345	A2	19880610	JP 1987-292194	19871120
	EP 269397	A2	19880601	EP 1987-310306	19871123
	EP 269397	A3	19881207		
	R: DE, FR, GB				
PRAI	US 1986-933658	A	19861121		
	US 1986-933660	A	19861121		
	US 1986-933712	A	19861121		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4743531	ICM	G03C001-72
	INCL	430281000
	IPCI	G03C0001-72 [ICM,4]
	IPCR	G03C0001-00 [I,C*]; G03C0001-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A]; G03F0007-031 [I,C*]; G03F0007-031 [I,A]
	NCL	430/281.100; 430/286.100; 430/287.100; 430/919.000; 430/920.000; 522/025.000
CA 1329042	IPCI	G03C0001-72 [ICM,5]; G03F0007-028 [ICS,5]; G03F0007-008 [ICS,5]
	IPCR	G03C0001-00 [I,C*]; G03C0001-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A]; G03F0007-031 [I,C*]; G03F0007-031 [I,A]
JP 63138345	IPCI	G03C0001-68 [ICM,4]; C08F0002-50 [ICS,4]; C08F0002-46 [ICS,4,C*]; G03C0001-00 [ICS,4]
	IPCR	G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-031 [I,A]; G03F0007-031 [I,C*]
EP 269397	IPCI	G03C0001-68 [ICM,4]; G03F0007-10 [ICS,4]
	IPCR	C07D0311-00 [I,C*]; C07D0311-16 [I,A]; G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-031 [I,A]; G03F0007-031 [I,C*]

GI

/ Structure 15 in file .gra /

AB A photog. imaging system is disclosed comprising an imaging dye or a precursor thereof, a hardenable org. component contg. ethylenic unsatn. sites and capable of imagewise modulating mobility of the dye or dye precursor as a function of addn. at the sites of ethylenic unsatn., and coinitiators for ethylenic addn. The coinitiators include an azinium salt activator and a photosensitizer which is a dye exhibiting a redn. potential which in relation to that of the ionized azinium salt activator is .ltoreq.0.1 V more pos., and when the photosensitizer is a keto dye having its principal absorption peak at a wavelength <550 nm, it exhibits when excited by imaging radiation and intersystem crossing efficiency to a triplet state of <10%. The system produces primary dye images efficiently with radiation of any desired wavelength in the visible spectrum and can exhibit sensitivity extending into near IR region. Thus, a compn. contg. Ph 1,2,4-tri(2-acryloyoxy Et carboxylate), 2-acryloyloxy Et benzoate, 1-methoxy-4-Ph pyridinium tetrafluoroborate (redn. potential-0.75 V), and I (.lambda.max 430 nm, redn. potential -1.45 V) was highly effective in forming images.

ST photoimaging compn dye sensitized; redn potential dye image

IT Photoimaging compositions and processes
(color, dye-sensitized, redn. potential in relation to)

IT Polymerization catalysts

```
      (photoimaging compn. contg., redn. potential in relation to)
IT   Dyes
      (photosensitizer, for imaging compn., redn. potential in relation to)
IT   Electric potential
      (redn., of dyes and activators, for photoimaging compn.)
IT   15622-80-7   39144-57-5
     RL: USES (Uses)
      (photoimaging compn. contg., dye-sensitized)
IT   65-61-2   92-32-0   117-92-0   514-73-8   550-15-2   634-21-9   977-96-8
     989-38-8   2156-29-8   2768-90-3   3065-70-1   3065-71-2   3071-70-3
     4727-50-8   14238-43-8   14238-53-0   14806-50-9   15185-43-0   17636-07-6
     19764-96-6   23178-67-8   23857-69-4   24796-94-9   25470-94-4
     27425-55-4   36437-64-6   36536-22-8   38215-36-0   41044-12-6
     41387-42-2   41830-81-3   53213-82-4   53213-85-7   53332-41-5
     54290-14-1   54797-03-4   54854-14-7   60311-02-6   61105-56-4
     61526-53-2   62669-60-7   62669-62-9   68818-86-0   80566-27-4
     94564-82-6   94564-93-9   98766-45-1   100301-28-8   100834-48-8
     100834-63-7   105802-46-8   114720-33-1   116450-20-5   116450-21-6
     116450-22-7   116450-23-8   116450-24-9   116450-26-1   116450-28-3
     116450-29-4   116450-30-7   116450-31-8   116450-33-0   116450-36-3
     116450-37-4   116450-38-5   116450-39-6   116450-40-9   116450-41-0
     116450-42-1   116450-44-3   116450-45-4   116450-46-5   116450-47-6
     116450-48-7   116450-49-8   116450-50-1   116450-51-2   116450-52-3
     116450-53-4   116450-54-5   116450-56-7   116450-58-9   116450-60-3
     116477-15-7   116477-16-8   ***116477-17-9***
     RL: USES (Uses)
      (photosensitizer, in photoimaging compn. redn. potential in relation
      to)
IT   96-66-2   63123-42-2   116450-61-4   116450-62-5   116450-64-7
     116450-65-8   116450-67-0   116450-68-1   116450-70-5   116450-72-7
     116450-74-9   116477-18-0
     RL: CAT (Catalyst use); USES (Uses)
      (polymn. catalyst, photoimaging compn. contg., redn. potential in
      relation to)
IT   116450-32-9P   116450-34-1P   116450-35-2P
     RL: SPN (Synthetic preparation); PREP (Preparation)
      (prepn. and use of, as photosensitizer in photoimaging compn., redn.
      potential in relation to)
IT   10258-72-7   16002-30-5   17754-90-4, 4-Diethylaminosalicylaldehyde
     116450-75-0
     RL: RCT (Reactant); RACT (Reactant or reagent)
      (reaction of, coumarin dye from)


=> d his

     (FILE 'HOME' ENTERED AT 13:34:02 ON 17 NOV 2006)

     FILE 'CAPLUS' ENTERED AT 13:34:16 ON 17 NOV 2006
L1            1 S US 2004-0197705/PN

     FILE 'REGISTRY' ENTERED AT 13:34:51 ON 17 NOV 2006

     FILE 'CAPLUS' ENTERED AT 13:34:58 ON 17 NOV 2006
L2              TRA L1 1- RN :       11 TERMS

     FILE 'REGISTRY' ENTERED AT 13:34:58 ON 17 NOV 2006
L3           11 SEA L2

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L4            3 S L3

     FILE 'REGISTRY' ENTERED AT 13:36:04 ON 17 NOV 2006
L5              STRUCTURE UPLOADED
L6            2 S L5 SSS FULL

     FILE 'CAPLUS' ENTERED AT 13:36:41 ON 17 NOV 2006
L7            2 S L6

=> log y
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
```

FULL ESTIMATED COST	6.60	198.02
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.50	-3.75

STN INTERNATIONAL LOGOFF AT 13:37:17 ON 17 NOV 2006